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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,125	03/14/2001	Ahti Muhonen	P 277938	5897

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Pillsbury Winthrop LLP
1600 Tysons Boulevard
McLean, VA 22102

EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

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DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/787,125

Applicant(s)

MUHONEN, AHTI

Examiner

Stephen M. D'Agosta

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-13 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other: .

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The list of references (specification, page 11) is not in the correct location – it typically is listed at/near the beginning of the specification. Appropriate correction is required.

Content of Specification

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Beddoes et al. EP0597638 and further in view of Grandberg US 6,122,510 (hereafter Beddoes and Grandberg).

As per **claim 1**, Beddoes teaches a method for supporting charging of a subscriber of a mobile station in a GSM cell network (eg. supporting circuit/packet-switched connections) with the mobile (title, abstract and C2, L14-16, GSM can support both circuit and packet communications), comprising:

Defining, for each of the mobile stations, a corresponding set of special cells providing at least one special service to the corresponding mobile station (abstract teaches different cells with different tariff rates for different service(s), eg. on/off peak, Local, Tariff A, Tariff B, etc.) [C3, L4-11 and C3, L50-54]

Reporting an indication of a set of special cells to the mobile AND Responding to the reporting by sending the indication of the set of special cells to a radio control element in a downlink message (C3, L3-11)

Determining whether the mobile station is in one of its corresponding special cells (C3, L12-49 teaches the network being aware of the mobile's location as it roams and making handoff decisions which reads on this limitation).

But is silent on reporting in an ISD message in response to a mobile station initiating an attach or a routing area update procedure.

Granberg teaches the HLR receiving a location update request or initiates a stand-alone message to insert subscriber data (due to data being inserted or modified in

the HLR), the HLR checks whether the network-specific indicator is set for that particular mobile subscriber. If so, the network-specific service information stored for the particular MSC in the HLR is sent to the MSC where the subscriber is registered or is in the process of being registered. Since that network-specific service information for that particular subscriber is stored in the VLR of the serving MSC, the CAMEL service indicated by that information will be invoked for calls involving the subscriber in that network (C8, L11-22).

It would have been obvious to one skilled in the art at the time of the invention to modify Beddoes, such that the ISD message is used, to convey information to/from the MSC/HLR about special service rates the ISD message when the user registers/roams via a well known cellular network "update" message

As per **claim 14**, Beddoes teaches claim 1 further comprises producing charging information related to the mobile station (abstract, C3, L3-11 teaches generating charging/tariff rates).

As per **claim 15**, Beddoes teaches claim 1 wherein responding to the reporting is performed by the at least one mobility support element (C3, L24-30 teaches "central control" which is a system that supports the mobile and is responsible for monitoring/reporting of each mobile's calls).

As per **claim 16**, Beddoes teaches claim 1 wherein reporting an indication of a set of special cell is performed by a subscriber register (C3, L24-30 teaches "central control" which is interpreted by the examiner to be the MSC/HLR which reads on a subscriber register).

Claims 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Beddoes/Grandberg and further in view of Nevo et al. US 6,320,873 (hereafter Nevo).

As per **claim 2**, Beddoes teaches claim 2 **but is silent on** wherein the downlink message is a BSS GPRS Protocol message.

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Nevo teaches BSS 32 communicates with SGSN 52 over a standard, substantially unmodified GSM/GPRS Gb interface. This interface preferably includes GSM L1 bis, network service and BSS GPRS protocol (BSSGP) layers. The network service and L1 bis layers are preferably defined in accordance with the GSM 08.16 standard, and the BSSGP layer is preferably defined in accordance with the GSM 08.18 standard, which standards are incorporated herein by reference. The BSSGP layer conveys routing and information related to quality of service (QoS) between BSS 32 (or BSS 30) and SGSN 52. The network service layer transports BSSGP packet data units (PDUs), based on the frame relay connection between the BSS and the SGSN, which may traverse a network of frame relay switching nodes. BSS 32 translates CDMA Layer 1 and GSM-CDMA RLC protocols exchanged between the BSS and MS 40 into appropriate L1 bis, network service and BSSGP protocols for transmission to SGSN 52, and vice versa (C6, L60 to C7, L10).

It would have been obvious to one skilled in the art at the time of the invention to modify Beddoes, such that a BSS GPRS Protocol message is used, to utilize existing standardized protocols and their established messages to transfer information in the GSM system.

Claims 17-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Beddoes/Grandberg/Nevo and further in view of ETSI Standards TS03.73 v0.5.0 or TS 2.43 v0.0.0 or GSM 12.15 v2.0.0(hereafter ETSI).

As per **claim 17**, Beddoes teaches claim 2 **but is silent on** wherein the downlink message is a BSSGP_DL_INITDATA message.

The ETSI Standard's referenced by the applicant (page 11, #2, #3, #4) teach the BSSGP interface being used to control the transfer of frames passed between an SGSN and a mobile station. Hence one skilled would use an ETSI standardized message to convey data to/from the mobile and network.

It would have been obvious to one skilled in the art at the time of the invention to modify Beddoes, such that a BSSGP_DL_INITDATA message is used, to utilize existing standardized messages to transfer information.

As per **claim 18**, Beddoes teaches claim 2 **but is silent on** wherein the downlink message is a SoLSA BSSGP message.

As disclosed by the applicant, special service areas are referred to as localized service areas (LSA's) and the support of LSA is called SoLSA (page 3, L4-11). The ETSI Standard's referenced by the applicant (page 11, #2, #3, #4) and Beddoes' teaching for a GSM system (eg. supports BSSGB) would therefore include support for SoLSA downlink messages to convey information.

It would have been obvious to one skilled in the art at the time of the invention to modify Beddoes, such that a SoLSA BSSGP message is used, to utilize existing standardized messages to transfer information.

Allowable Subject Matter

Claims 4-13 allowed.

The independent claims 4, 12 and 13 recite the limitations of (rejected) claim 1 but further disclose; 1) determining/indicating a corresponding event which affects charging, 2) classifying a detail item into at least one class of multiple classes depending on whether the event occurred while the mobile was in a special cell and 3) performing/supporting the classification using at least one mobility support element.

These detailed teachings are not disclosed by the prior art cited.

Claim 3 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art cited does not disclose; 1) determining/indicating a corresponding event which affects charging, 2) classifying a detail item into at least one class of multiple classes depending on whether the event occurred while the mobile was in a special cell and 3) performing/supporting the classification using at least one mobility support element.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Ward et al. US 5,974,320
2. Smyth et al. US 6,347,224
3. Ekbatani US 5,754,955
4. Sextl EP-0734144

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

SMD



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600